

NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

INCH-POUND

MIL-PRF-94E
AMENDMENT 2
15 March 1996
SUPERSEDING
AMENDMENT 1
2 JUNE 1993

PERFORMANCE SPECIFICATION

RESISTOR, VARIABLE, COMPOSITION GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-R-94E, dated 10 September 1992, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

* Bottom of page, delete and substitute:

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: DESC - ELDM, 1507 Wilmington Pike, Dayton, OH 45444 - 5765 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

PAGE 2

TABLE IV, delete and substitute:

TABLE IV. Style of operating shaft.

Symbol	Shaft
F	Flatted
S	Slotted

PAGE 3

* 2.1.1, SPECIFICATION, FEDERAL, delete "QQ-S-571" and its corresponding title.

* 2.1.1, SPECIFICATION, delete "MILITARY, MIL-R-39032" and its corresponding title.

* 2.1.1, STANDARDS, MILITARY, delete "MIL-STD-45662" and its corresponding title.

* Following 2.1.1, add new 2.2:

"2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.2)."

AMSC N/A

1 of 5

FSC 5905

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MIL-R-94E
AMENDMENT 2

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI/NCSL Z540-1 - Calibration Laboratory and Measuring and Test Equipment, General Requirements for.

J-STD-006 - Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid solders for Electronic Soldering Applications.

(Application for copies should be addressed to the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.)

INTERNATIONAL ORGANIZATION for STANDARDS (ISO)

ISO 10012-1 - Quality Assurance Requirements for Measuring Equipment, Part 1 Meteorological Confirmation System for Measuring Equipment.

(Application for copies should be addressed to the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.)"

PAGE 7

* 3.4.5, delete "QQ-S-571" and substitute "J-STD-006".

After 3.4.5, add the following new paragraph:

"3.4.5.1 Tin plated finishes. Use of tin plating is prohibited as a final finish and as an undercoat (see 6.15.1). Use of tin-lead (Sn-Pb) finishes are acceptable provided that the minimum lead content is 3 percent."

PAGE 13

4.5.1.1, delete in its entirety and substitute:

"4.5.1.1 Inspection and production lot.

"4.5.1.1.1 Inspection lot. An inspection lot, as far as practicable, shall consist of all resistors of the same style, regardless of the resistance value, produced in a period not to exceed 30 days, produced under essentially the same conditions, and offered for inspection at one time.

"4.5.1.1.2 Production lot. A production lot shall consist of all resistors of the same style, nominal resistance value, and resistance tolerance. Manufacture of all parts in the lot shall have been started, processed, assembled, and tested as a group. Lot identity shall be maintained throughout the manufacturing process."

PAGE 14

4.5.1.2.1.3.2a., after first sentence, add:

"Five samples shall be selected from each production lot that formed the failed inspection lot."

PAGE 15

4.5.1.2.1.3.2b., last sentence, delete and substitute:

"If the lot fails this solderability test, the lot may be reworked a second time and retested. If the lot fails the second rework, the lot shall be considered rejected and shall not be furnished against the requirements of the specification."

MIL-R-94E
AMENDMENT 2

PAGE 17

* 4 6.2a, delete and substitute:

- *a Measuring apparatus: Different types of measuring test equipment (multimeter, bridges, or equivalent) are permitted to be used on the initial and final readings of this test, provided the equipment is the same style, model, or if it can be shown that the performance of the equipment is equivalent. The supplier shall establish and maintain a calibration system in accordance with ANSI/NCSL Z540-1, ISO 10012-1, or equivalent system as approved by the qualifying activity."

PAGE 23

* 5.1, delete and substitute:

"5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD personnel these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity."

PAGE 26

6.13, end of last sentence, add: "and table XVII-1 herein."

MIL-R-94E
AMENDMENT 2

Before table XVIII, add the following new table:

"TABLE XVII-1. Performance requirements

Style	RV2	RV4	RV5	RV6	RV7		RV8
Maximum ambient temperature at rated wattage (see figure 6)	70°C	70°C	70°C	70°C	70°C		70°C
Maximum ambient temperature at zero rated wattage derating (see figure 6)	120°C	120°C	120°C	120°C	120°C		120°C
Power rating in watts Taper A (see 3.5.3.1) Tapers C and F (see 3.5.3.2)	1.0 0.5	2.0 1.0	0.5 0.25	0.5 0.25	panel 0-2.0	rear 1.6-0	0.5 0.25
Maximum percent change in resistance:							
Rotational life (see 3.10)	10	10	10	10	10		10
Load life (see 3.12)	10	10	10	10	10		10
Moisture resistance (see 3.13)	10 max	10 max	10 max	10 max	10 max		10 max
Low temperature storage (see 3.14)	2	2	2	2	2		2
Low temperature operation (see 3.15)	3	3	3	3	3		3
Thermal shock (see 3.16)	6	4	6	4	4		4
Shock (specified pulse) (see 3.18)	2	2	2	2	2		2
Vibration, high frequency (see 3.19)	2	2	2	2	2		2
Insulation resistance (after moisture resistance (see 3.13)	100 megohms	100 megohms	100 megohms	100 megohms	100 megohms		100 megohms
Resistance tolerance \pm percent (see table V)	10 and 20	10 and 20	10 and 20	10 and 20	10 and 20		10 and 20

After 6.15, add the following new paragraph:

"6.15.1 Tin plated finishes. Tin plating is prohibited (see 3.4.5.1) since it may result in tin whisker growth. Tin whisker growth could adversely affect the operation of electronic equipment systems. For additional information on this matter refer to ASTM B545 (Standard Specification for Electrodeposited Coating of Tin)."

MIL-R-94E
AMENDMENT 2

The margins of this amendment are marked with an asterisk to indicate where changes from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85
NASA - NA

Review activities:

Army - AR, AT AV, ME, MI
Navy - AS, MC, OS
Air Force - 17, 19, 99
DLA - ES

Preparing activity:

Army - ER

Agent:

DLA - ES

(Project 5905-1464)